Green Alder Sawfly Monitoring Southwest Idaho

BFO-PR-2015-02

Introduction

The non-native green alder sawfly (GAS), *Monsoma pulveratum,* was first detected in North America in the mid 1990's in Newfoundland, Canada (Smith, and Goulet2000). Since then it has been detected in Alaska, Washington, Oregon and most recently in Northern Idaho (Kegley et al. 2012). This sawfly is native to Europe and North Africa and feeds mainly on alder (*Alnus*) spp. Adult GAS is 7-10 mm with a striped yellow abdomen and red upper legs (Figure1). They emerge in spring and lay eggs on alder leaves. Larvae are 15-18mm in length and bright green in color (Figure 1) emerging two weeks after eggs are laid and feed heavily on leaves. When development is complete they drop to the ground and excavate a chamber 1-5 cm beneath the soil. The following spring they pupate and emerge as adults. In Alaska widespread thin leaf alder mortality from GAS, other sawflies and canker fungi has been recorded over several acres (Figure 1) of riparian area with little signs of recovery (Kruse et al. 2010) This loss to riparian areas may have greater affect to surrounding ecosystem due to stream shade loss and soil nutrition.

In the spring of 2014 Forest Health Protection, Boise Field Office began the first surveys for GAS in southwest Idaho to augment the collaborative monitoring efforts in the Northwest. Trap locations were concentrated mainly around the Idaho City area and trap sites were set in riparian areas with high density mountain alder, *Alnus tenuifola*. The objective of the trapping effort is to detect GAS and record defoliation levels upon detection.

Figure 1 : Non-native Green alder sawfly adult (a), larva (b), and defoliation in Alaska

Methods

A total of three sites (Figure USFS1) were selected based on road access and proximity to host near Idaho City with two sites on the Idaho City Ranger District, Boise National Forest, and one on Idaho Department of Lands property.. All sites had a total of 0.5 acres or more of contiguous alder stands that were easily accessible for quick collection. At each selected location three yellow panel traps (18x14 cm) with a pressure sensitive adhesive were hung from branches with a twist tie approximately six feet above the ground. Each trap was more than 20 feet but no more than 60 feet apart. GPS location, elevation and alder species were recorded for each trap site. Traps were deployed in early April and were monitored through August. At monthly intervals traps were collected by FHP staff and the existing trap was replaced with a new trap. The retrieved traps were brought to the FHP BFO lab and were examined for presence of GAS.

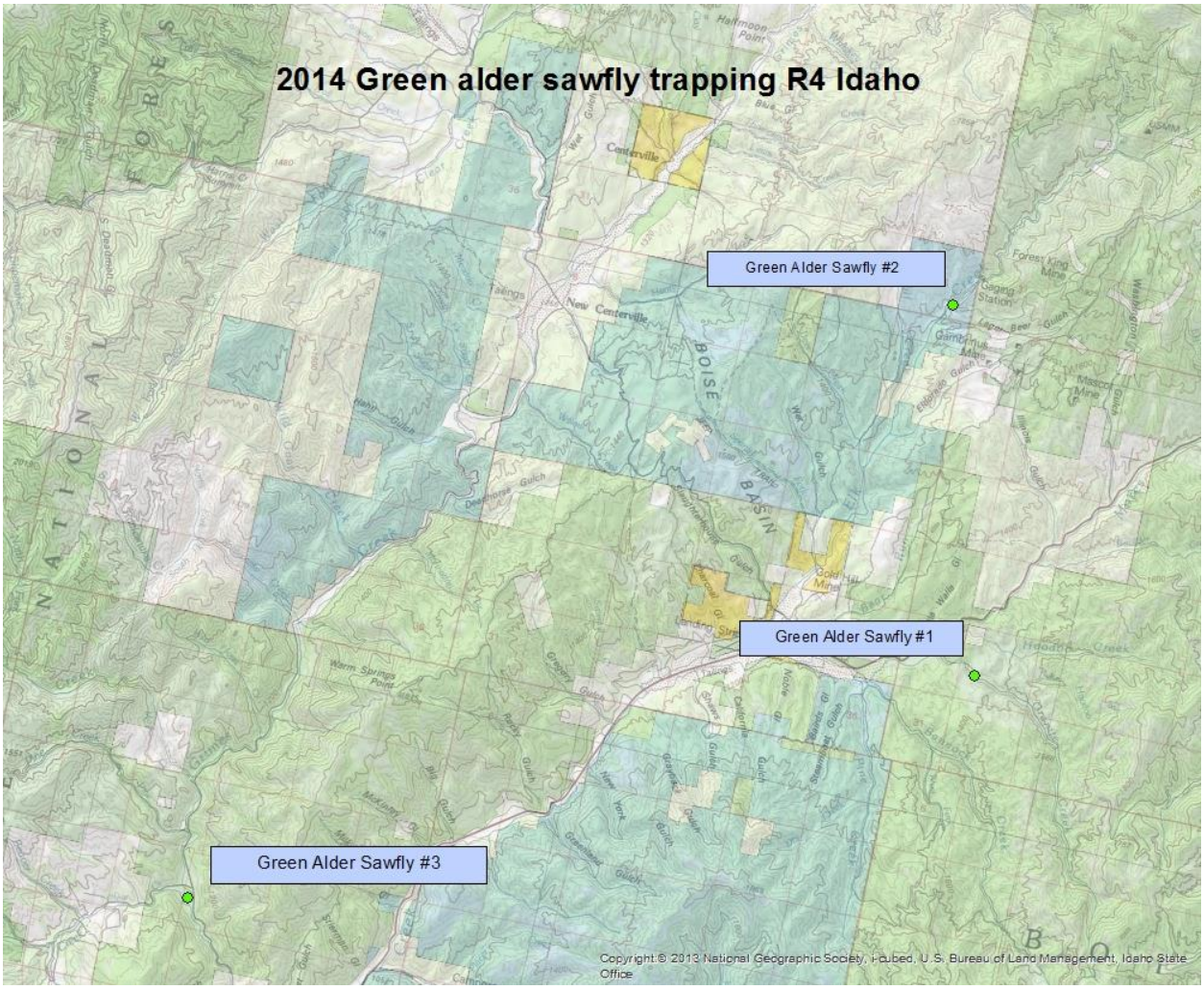
2014 Green alder sawfly trapping R4 Idaho
Green Alder Sawfly #2
Green Alder Sawfly #1
Green Alder Sawfly #3
Centerville
New Centerville
BOISE
BASIN
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Figure 2. Green alder sawfly trap locations, near Idaho City Ranger District, Boise National Forest in 2014.

Results and Discussion

Upon lab examination of the traps no positive identification of green alder sawfly was found in the Idaho City sites. Many other sawflies were found on the traps but none appeared to be non-native. The alder stands where trap sites were located showed no sign of significant defoliation characteristic of sawfly feeding and subsequent defoliation. In some of the trapping areas light defoliation was detected. This defoliation however was caused by large number of alder flea beetle, (*Altica ambiens*), a native insect to the southwest Idaho region. In 2015 monitoring and trapping detection efforts will continue in region 4 portion of Idaho. Traps sites in 2015 will concentrate on areas near the Payette NF were climatic conditions are more similar to areas with positive GAS identifications of North Idaho.

If you have any questions or comments regarding this report, or if you require any further information on the biology and/or management of forest insects/diseases, please contact Boise Field Office, Joel McMillin at 208.373.4227.

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References:

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